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THE HEGEMONY OF SCIENCE AND PHILOSOPHY.

I.

THE cardinal point in the Kantian philosophy is, that if science is a function of mind, it is neither the sole nor the most important function. There are limits between which scientific exposition may be applied, but beyond these rests a vast territory in which our speculations must be controlled by entirely different principles. Such is the fundamental idea of Kant. On the contrary, it is on the established or probable data of science that Auguste Comte proposed to construct what he denominated the cerebral unity of mankind. To which of the two must we grant the true intellectual hegemony? This problem still profoundly interests minds not only in France but in all those countries which concern themselves with the future. In our day, we have seen, after the philosophers, critics, novelists, poets, and then professional scientists take up the question of the relations of science to belief. These excursions of scientists and men of letters into the domain of philosophy have served the purpose of reviving interest in great problems. The single drawback is, that neither side has always given sufficient attention to defining their terms, to properly stating the question at issue, to avoiding hasty solutions. Men of letters are too often unable to go beyond the vague idealism with which Renan contented

himself, or professional scientists beyond the narrow positivism of a Littré. We have seen very recent illustrations of this danger in the discussions which have arisen on several occasions between men of letters and scientists over the so-called "bankruptcy of science." Those who have maintained this thesis have employed subtle tactics: they have arrayed on the one hand the positive results of special sciences,—they have confined themselves in the meanwhile to physical and natural sciences,—and then, on the other hand, they have pointed us to religions with their replies all ready to the problems of life and conduct. The scientists, in their turn, have vaunted the benefits of science, and its discoveries in the material and industrial order, as if morality were a mere question of physical well-being or of pure hygiene. We should indeed be led to conclude that a philosophy or a system of ethics had never existed unless in theologies and mythologies of all descriptions or in mathematics, physics, and physiology. This would be making too cheap a disposition of history; it would erase at a single stroke of the pen the sciences, so justly called moral, from psychology and ethics to philosophy proper. Most certainly, if it be true that physics and natural history, as such, ever engaged to furnish a philosophy of the world and of life, we should be justified in concluding that these sciences have bankrupted themselves, that they have meddled with that which in no way concerns them. In the same way, chemistry would bankrupt itself, should it pretend to explain the movement of the stars, the precession of the equinoxes, the eclipses of sun or moon. And by the same reasoning, theology went into bankruptcy when it presumed to decide that the sun moves around the earth, since Joshua once stopped its course. Every usurpation of one science on a domain foreign to it, is sure to end in such discomfitures as these. These bold adventures, it is true, are too common on the part of scientists, who, in the pride of their special discoveries, imagine sometimes that they have discovered the universal secret; fortunately, these scientists do not constitute science. Should all bankers become insolvent, arithmetic would still be as trustworthy as ever. Perfectly legitimate as

it is to restrict each scientist to his own territory, it is as truly illegitimate to hold Science (with or without the capital) responsible for the false bills of exchange drawn in its name. It is ignorance and not science which in such cases always goes into bankruptcy. The bankruptcy of science could by no possibility consist in aught else than this pretension to usurp the place of philosophy; for in its own domain scientific truth is worthy of our respect, even of our love, since it contributes to our intellection of things. Saint Augustine says: *valde ama intellectum*. Neither the gates of hell nor those even of paradise shall prevail against science.

A few years ago, the youths in our schools were divided between the neo-idealists and the neo-positivists. In an eloquent discourse to students, M. Zola declared himself a "hardened old positivist," and felt under obligations to apologize for science. "Did it promise happiness?" he inquired. And he replied: "I do not believe it. Science promises truth, and the question is to know whether we shall ever be able to manufacture happiness out of truth. In order to be at peace some day, we need a great deal of sacrifice, the absolute renunciation of self, a serenity of intelligence satisfied, which, as it seems, is possible only among the elect few. But as we wait, what a cry rises from suffering humanity. Shall we ever be able to live without lies and without illusions?" M. Zola conceded, in the course of his address, that in literature the naturalist school had "too much narrowed the horizon." "Personally, I regret that I ever became a sectary in my desire to confine art to truths that were capable of demonstration." Would not M. Zola be forced to admit that in philosophy also, positivism has too much narrowed the horizon? And can we admit the pretended positivist definition which M. Zola gives us of the ideal? "What else is the ideal," he asks, "than the inexplicable, those forces of the vast universe in which we bathe without knowing what they are?" No; the ideal cannot signify the unknown; it is the direction—cognizable at least in part—of the reality as it arrives at a consciousness of itself in man. M. Zola concluded by counselling his hearers to forget the "malady of the infinite." He advised

those who suffer from the "mysterious" to throw their life "into some gigantic labor," which would bring good results even if they never saw the end of it. But thus presented as a daily duty, without any principle to justify this duty, work becomes at bottom only a means of intoxicating yourself, a means of "diversion," as Pascal said, more hygienic (in general) perhaps than gaming and dissipations of other sorts, but the true moral sense of which escapes us for the lack of some philosophical doctrine which fixes for the individual his place in human society and in universal society. M. Alexandre Dumas appeared on the scene of action, and was not afraid to predict that men, after having tried everything else, would end, "and that very soon," by applying seriously to life the law of brotherly love, that they would even be swept away "by the madness, the rage of love." He declared that he discerned already among those phenomena which seemed so menacing to us, the signs of these love-tendencies which spring up among men. Tolstoï, who leans towards an analogous optimism, affirmed that "the more men believe that they can be led by some exterior force operating outside of their own will in transforming and ameliorating their own existence, with the greater difficulty will this amelioration take place." M. Brunetiere demonstrated with his habitual ardor that the physical and natural sciences have not succeeded in explaining the nature of man as man,—that is to say, as a being endowed with feeling, thought, and will; and still less the origin of those genuinely human attributes, of that which constitutes man as such, and that in consequence these sciences have failed to reveal to us the future destiny of the essentially human in man. But the eloquent writer went beyond the goal which he had set for himself by pushing the offensive too far; in thus confronting religion and science, he seemed to forget philosophy. This was in the eyes of Tolstoï the principal defect in the address of M. Zola. "On the contrary, the more they believe in what Dumas predicts, that the time will come, infallibly and soon, when men, inspired by brotherly love, will modify of their own volition the whole of their existence, the more rapidly will this time arrive." Relying on the force of

ideas, Tolstoï concluded that "by announcing this modification in human sentiments, we shall realize it the sooner." Very recently still, this question of science and faith appeared in France in a still more sharply accentuated and ringing form. The following are the principal arguments produced in this debate. "We are not able," declares one, "to conceive of man without morality, without language, and not in society; and these are the very elements of the definition which surpass the means, the methods, and the pretensions of science." Of purely physical science, yes; but can psychological and moral sciences teach us nothing as to the origin of society, which, as it appears, springs from the social instincts of men, just as in certain animals from social instincts less highly developed, and which have nothing supernatural in them? "Science," declares another, "has not sufficiently accounted for the origin of man." Nor that of the insect or of the bird. Must we for that reason suppose a miraculous origin? "Science has not entirely explained the origin of human language." Nor the origin of the nightingale's song. Must we then conclude that God was its singing-master? The questions of historical origin acknowledge a mass that is unknown, but never miracles and mysteries. The metaphysical origin of matter and thought is a mystery only for our intelligence; but science has never promised to unveil this mystery, nor to make known the unknowable. The positivism of Comte and the evolutionism of Spencer have given to the unknowable even an exaggerated rôle. The Mosaic hypothesis of creation, we must admit, "gives us a reply to the question, whence we come, and the theory of evolution will never give us this answer." But the hypothesis of the emanation from the bosom of Brahma, and, generally speaking, religious narratives of all sorts, give us likewise a reply to the same question. How, then, are we to choose without summoning philosophy to our aid?

If our intelligence is not above suspicion, what are we to say as to our feelings and our imagination? These faculties which you declare incapable of real integrity when philosophy and science are concerned, will they suddenly become veracious when the question is of religious myths? And are we

to argue that men of science are inferior to aborigines like Moses, because the latter had more imagination and knew less?*

Science, unfortunately for it, has been defended by scientists. One of the most illustrious of these has reminded us that we are indebted to science for the telegraph, the railroad, and even "dyestuffs"! M. Berthelot adds, that "he adheres to the moral code of duty and of the honest man." His morality has its origin neither in "egotism nor fanaticism." Of course. But is that a reason why this code should not rest on some philosophical principle? Does it imply none in its principles or in its conclusions? That is what the scientists do not tell us. To the question of what we are, M. Morselli thinks it sufficient to answer, "We are vertebrates, mammals, primates of

* Nor have the philological sciences been able in their turn to keep all of their promises. If it is true that the Hellenists "formally engaged to show us in the philosophy of Greece and Rome the whole of Christianity," the Hellenists were certainly very presumptuous. But I fail to see that Ernest Havet has ever appeared to believe that the whole of Christianity is in Hellenism. Progress is undeniable in humanity. One is justified in saying that there will always be "something in Christianity which Hellenism cannot explain," but whether explicable by natural means or not, is an entirely different question. Shakespeare cannot be explained by the literature which preceded him, and which contains nothing which adds to his genius; but we are not to conclude from this that "Macbeth" and "Hamlet" were composed under the dictation of the Holy Ghost. Likewise, the Hebraizers have not explained the Bible by the Mahabharata; but we must grant also that the Orientalists have just as little explained the Mahabharata by the Bible; all of which does not go to prove that the Mahabharata is a supernatural work, but only an original work. "There is something in the history of the people of God which is not to be found in that of any other." That is certain. And we can also say that there is something in the history of the Greeks which cannot be found in that of any other, not even in the history of the Hebrews. It does not seem to us that we have here, either for Greek or Hebrew, proof of anything "irrational" or "marvellous." History, also, has not discovered "a law of history," and this though historical sciences are mere "idle curiosity," if their least researches do not tend to "a philosophy of history." But this philosophy is the task of philosophers; and if Condorcet, Turgot, Comte, Vico, Herder, Kant, and Hegel have not revealed some single law of history which was absolute, they have nevertheless discovered a multitude of partial laws which leave this to be inferred. Moralists *a priori* can declare this law, and sociologists *a posteriori* can with more and more ease discover its operation in the bosom of actual societies.

an order but slightly different from that of the quadrumanes." * To the question, "whence we come?" M. Morselli replies, "We come from earlier forms which, in the adaptations to the conditions of life, have acquired the small number of specific characteristics by which we distinguish other anthro-poids." At this moment one has just discovered a form which is probably intermediate between man and the pri-mates,—the "*Pithecanthropus erectus* of Sumatra." M. Mor-selli did not perceive here that he was replying to questions of a purely biological character which teach us nothing of what we are morally and intellectually.

II.

In this entire discussion, in which the point at issue is to determine whether or not science is to have the final leader-ship of humanity, one thing has been neglected,—the defini-tion of science. This term has a broad sense and a restricted sense. A *science*, in the broadest acceptance of the term—or at least a *cognition*—is a rationally established system of facts and ideas which, over a given range of objects, confers cer-tainty, assurance, probability, or even a doubt that knows why it doubts. To know that we do not know, and why, is none the less to know; a negative solution is, after its fashion, a solution. To know that a thing is possible, or, better still, that it is probable by virtue of such and such reasons for it and such and such reasons against it, is always to know. Thus it is that belief founded on reason enters the category of science. Science is then each legitimate product of the intelligence operating freely with the aid of what the theologians call "natural reason." Thus understood, science includes uni-versal philosophy as well as special sciences. It is belief alone, founded on the authority of others, not regulated, and in-capable of demonstration, or on the imagination or feelings to which a supernatural bearing is given, which must be excluded from the domain of knowledge and of science in the broadest sense of the word.

* "*La Pretesa Bancarotta della Scienza*," Parma, 1895.

Apart from the antagonism of natural intelligence and supernatural belief, we can establish in the domain of the former a new antagonism between the pure sciences and philosophy.

Science, in the true sense of the word, hinges on the relations of objects to each other independently of their relation to the sentient and thinking object. This last relation, at least, is understood. Among the ancients, as M. Boutroux has excellently demonstrated, science is the cognition of that which *is*, of that which subsists amid all changes. For them, it is the substance, the essence, the completed form or act; it is the efficient cause; it is, above all, the final cause. That is to say, science is philosophy itself. As we moderns understand it, science becomes, by detaching itself from philosophy, the perception of the constant relations between things, such as these appear to us, independently of what they may be in themselves. Science hinges, above all, on the laws of growth and change; on the laws, at one and the same time both practical and theoretical, of the *production* of things.

Bacon confines himself to the problem of material production: what phenomena must we assume, indeed, as the antecedent in order to produce some consequent phenomenon, without our being able to know in the meanwhile *why* the antecedent involves the consequent. Descartes, in his turn, assumes as a standard what has been termed the ideal production of mathematics, which undertakes to explain why this consequence is enveloped in this particular principle; considering every empirical fact as a consequence or effective solution of a mathematical problem, he endeavors to ascend to the data of the problem in order to establish the necessity of the sequence.

Unquestionable it is, that the positive sciences, as thus understood, will take an ever-increasing part in the utilitarian and even moral direction of humanity; for the world and life cannot present themselves with the same uniformity to a society in which the sciences have reached their maturity as to a society in which they are still in their infancy. Scientific ideas, moreover, are the only ones which are identical between indi-

viduals. The moment an element of faith enters among these ideas, individuals begin to disagree. When we appeal to the sentimental prejudices which frequently enshroud confused, imperfectly elucidated, and in part unconscious ideas, we appeal unquestionably to a considerable force, but to one which is sure to enclose a multitude of individual divergences. Sentiments which are the correlates of scientific ideas are those which have the most chance to fuse into a single and collective sentiment. The domain of peace increases, then, between minds with the domain of science, at that exact point where the light shines, whatever division may remain possible in other directions. Science is nothing else than that social knowledge which is one of the essential elements of social consciousness. That which is scientific, no one any longer disputes; it becomes henceforth part of the collective experience and the collective reason. Geometry, for example, is a social possession in the intellectual order, an integral part of an universal intelligence: society thinks and acts geometrically. Of course, the individual must rethink geometry and reconstruct it in order to understand it; but while his intellect thus puts itself in harmony with universal truth, we can say that it harmonizes also with social intelligence in which this truth is henceforth living and conscious. We are justified in concluding that each science socializes truth. While it is a step in advance towards the objective synthesis, it is also a step in advance towards the subjective and human synthesis; it contributes to the formation of the collective soul. It is not merely social intelligence which thus becomes richer and more systematic, more varied and more unified, but also social sensibility and social will. Finally, the sum total of social ideas of every kind engenders, along with correlative sentiments, correlative actions, not only in the individual but also, and above all, in the universal consciousness. Thus each one has a share in modes of action which are the property of all; different minds coincide in those truths which awaken them to common sentiments; they form thus a spiritual organism. Science is one of the constitutive factors of society; society is in its turn one of the constitutive factors of science. Man,

reduced to individual isolation,—if such isolation were possible,—would be about as incapable of science as the beast; he would have only a germ of it, imperfectly developed by a restricted experience. Science implies a society of consciousnesses which are exercised reciprocally and towards exterior things; it is a triple harmony with each and with the whole. The idea of an “organization by science” can merit only universal assent, because, as we have just seen, every scientific discovery is an enlargement of the social consciousness, and at the same time of social sympathy and social synergy.

It remains now to ask, whether the individual sciences are sufficient to found the true “cerebral unity” of the human race. This problem, which so profoundly engages the thought of to-day, is in the main exactly the one which Comte offers in the law of the “three estates.” Man, as they say, dies when he sees his own ghost; thus, according to Comte, theology sees its ghost in metaphysics and dies; and metaphysics then sees its ghost in science and dies in its turn.

In this difficult problem three hypotheses are possible; we may admit, either that theology and metaphysics will eventually be absorbed in positive science, or that they will continue to co-exist with science; but that they will have a domain more and more circumscribed, an influence more and more restricted, or that, while confining themselves more and more to their own domain, without infringing upon science, they will increase proportionably with the increase of science itself; so much so, that each scientific progress would not be a reduction, but an extension of true metaphysics and of true theology, or if you will, of true philosophy and of true religion. There is a development by negation and destruction; there is also a development by affirmation and construction; there is finally a development by the synthesis of the two into a single more comprehensive idea. It is in this method that true evolution consists, and the dialectic of Hegel is here in accord with the evolutionism of Spencer. If by metaphysics you mean the explanation of the facts of experience by means of entities and of causes which cannot be verified by experience or established in a definite relation with it, then it is

manifest that metaphysics, thus understood, ought to disappear, since it is only an erroneous way of construing scientific explanation. But we must distinguish ontology, which is an abstract mythology, from pure philosophy, which seeks its support in the real, embraced by consciousness.

That true metaphysics is to grow ever poorer and then disappear in the abstract, is hard to conceive when we pass from Heraclitus to Plato, from Plato to Aristotle, from Aristotle to Descartes, from Descartes to Leibnitz, from Leibnitz to Kant, from Kant to Hegel and to Schopenhauer. Metaphysics has surely been despoiled of its ontological character, of its entities, just as religion has been of its grosser myths; but its contents, far from having been impoverished thereby, have been enriched in the meanwhile under the twofold relation of extension and comprehension. True metaphysics contains, moreover, an element which cannot be reduced to the category of pure science, and which thus assures its perpetuity. We have seen that science concerns itself with the mutual relations of objects, considered independently of their relation (1) to a sentient and thinking subject; (2) to the whole of existence. This duplex relation is assumed, at least, but once for all; after which the phenomena, just as they are, being given, science engages to determine their objective relations, while it eliminates as much as possible the subject itself, the consciousness for which they exist and through which they are known. Such a point of view is partial and abstract, since it does not embrace the whole of the reality. What we term reality must be at one and the same time both objective and subjective; it is, the unity of things with the mind which knows them. Pure sciences are partial in still another respect, in that, even in the sphere of objects and their relations, they are restricted to fixed species of objects and to fixed categories of relations. After abstracting the thinking subject, they abstract still further all objects other than the one which is to be considered; the mathematician disregards all relations other than those of magnitude and extension; the mechanist all relations other than those of movement, and so on. These limits are essential to science as we understand

this in modern times, occupying, as science must, a special point of view. It is to these very limits that science owes its perfect certainty, for at the outset, it takes something for granted without mounting higher, and it stops at the given conclusions actually obtained without being obliged to anticipate what is to follow. Hence, also, its rigorous method, which, exercised between clearly determined boundaries, has only to seek generous ties between particular facts or particular concepts. Sciences consider thus simple "aspects" or simple "phases," never wholes. Comte, therefore, observed that to explain the slightest object,—an explanation which must always remain incomplete,—the scientist must summon to his aid a multitude of sciences: mechanics will account for a first aspect, physics for a second aspect, chemistry for a third, etc. When man is in question, nothing less than the totality of sciences will suffice. We are warranted, then, in affirming that the subjects of science are always finite. Positive science, content with making clear the relation of finite things to things finite, never deeming it necessary to embrace the infinite, the whole. The world always remains for science a broken mirror, while philosophy, by piecing together the fragments, strives to catch a glimpse of the grand image. Comte himself has declared that abstractions and "preliminary simplifications," without which there could be no science, in the true sense of the word, always require a corresponding process of recomposing, since we wish to arrive at prevision of the fact in its actuality. We are obliged, in order to thus revise, to re-establish the concrete unity of nature. But what is philosophy, if not a step further in the same direction? Philosophy corrects the abstraction which has thus been made of the thinking subject, re-establishes the unity of nature and of thought. It has been correctly observed that when science destroys the unity of the objective world, it does so, as a rule, consciously. The abstraction, on the contrary, which philosophy endeavors to correct, is generally unconscious. The geometrician knows well enough that the ellipse does not exhaust a planet's conditions of existence; but in revenge, he can very easily conceive that we can search for the laws

of the intelligible world without once taking into account the necessary relation of this world to intelligence. He can conceive, furthermore, that the intelligible laws of geometry would continue to exist unimpaired even if there were no sort of intelligence at the base of the real world. The province of the philosopher is to determine to what extent the real is thus possible without the intellectual.

Purely empirical psychology isolates the mind of the world, and considers it as an object among the objects which it must contemplate. Metaphysics or pure philosophy regards mind as "a part of all that it knows," that is to say, as conditioning what it knows at the very moment when it is conditioned by it. Philosophy is not then like science, a pure abstraction, but rather the integral re-establishment of the *concrete*. To philosophize, says Hegel, is to think the totality of things, to conceive of things in unity which is greater than their divergences, and accounts for these. Philosophy, even when it considers isolatedly the unity and the subjective movement of thought, just as geometry considers abstractly the relations of space, so acts in order to discover more surely and the more clearly this unity and this movement in all the *objects* of thought.*

If philosophy, as Auguste Comte has defined it, is the effort to arrive at a full cognition of the world, it is, according to Hegel, the effort to arrive at a complete "self-consciousness." The two points of view are true, and they are inseparable. We have a completer knowledge of ourselves in proportion as we know the world which acts on us and in us, and we have a completer knowledge of the world in its reality and in its intelligibility in proportion as we possess the fuller consciousness of that standard of reality and of intelligence which is in us, which is ourselves, and according to which we necessarily judge every other existence, every other thought. Philosophy may claim, then, over against the sciences that perennity of which Leibnitz spoke. And, furthermore, however incomplete the present philosophical conception of the

* See Caird, "Social Philosophy of Comte."

world and of life may be, it is nevertheless to philosophy that the intellectual hegemony in the practical order belongs, because the rational basis of morality depends neither on the positive sciences nor on religious faith, but on philosophy itself. Theoretically, we are unquestionably not obliged to philosophize; we may take the abstract point of view of science, and say, "Movements are conditioned by such and such laws which we formulate in this or that symbolical manner. That which actually moves, I do not know; why and how, I do not know." We are then like one, who, confronted with other men and animals, should say: "When I give a blow to these extended and mobile forms, I receive one in return which causes me pain. What there is back of the forms which thus resist me I do not know; why they strike me when I strike them I do not know. Could it be possible that my blows cause them something analogous to the pain which I experience? I do not know, and I do not wish to know." The attitude of the pure positivist towards nature is something like this; he is not willing to inquire whether behind the movements of these beings which he ranges under the category of inanimate matter there is not something analogous to that back of the movements of beings called dumb brutes and of beings called men. Just as he pleases! He is not forced to speculate on the real conditions of phenomena, in so far, at least, as no problem of practical morality demands a solution of the philosophical problem.

But as regards men and even animals, we are indeed obliged to assume the existence of the psychic behind mechanical appearances. If I looked on men as machines which did not feel, neither morality nor society would be any longer possible. The necessity of reasoning by analogy is here practically obligatory, and it receives its justification theoretically in the fact that *all takes place just as if other men felt and willed like ourselves*. For animals, the verification is the same, though less sure; so much so, indeed, that Malebranche could persuade himself that his dog did not feel.

With respect to beings called inanimate, the verification becomes more and more difficult, and even impossible. And it

is for this reason that we can here dispense with inductions and analogies. Practically and scientifically it is enough, then, to act according to the abstract laws of mechanics, without concerning ourselves with the inquiry whether these so-called inanimate beings are but the mask of some rudimentary form of psychic life. But as for the philosopher, this abstraction is not sufficient for him; his vocation is to make hypotheses, not, of course, upon the unknowable, but upon the unknown. When verification is no longer possible, he declares, exactly the reverse of Newton, "*Hypotheses fingo.*" And that hypothesis, moreover, which is the immediate and natural prolongation of experience, that is to say, sensation and impulsion, instead of springing up suddenly from nothing in animals, are already existent there under less developed and more stagnant forms,—at first in vegetables, then in minerals, and, generally speaking, in the molecules of which animals themselves are only more complex combinations. In other words, in the domain of positive science we are content to infer one relation from another relation without touching on the question of what reality lies beneath or beyond. To positive science, the proposition that "a stone is heavy" has in nowise the signification that the stone makes an effort of any sort or encloses in itself a *force* analogous to that which I feel; it expresses merely a normal relation between *phenomena*; but I am obliged to animate it, to spiritualize it in a certain fashion, just as I animate and spiritualize you in order to conceive you as *real*. When I examine objects that are supposed to be *inanimate*, when I conceive them philosophically in themselves, and no longer scientifically in their exterior relations among themselves or with me, I can represent them to myself only as *forces, tendencies, appetites, activities*, more or less obscure wills, in a word, as rudimentary sorts of self, as sub-conscious and quasi-mental existences; for mental existence is the only sort which cannot be resolved into phenomena and relations. When it is a question of similars, as we have seen, no more hesitation is possible: I throw myself completely into these, and they are for me other egos which, like me, suffer or rejoice, act, live, and wish to live. This induction which rests

on the actual, this objection of the mental, which is the single truth *an sich* which I can apprehend, because it is in me, because it is myself,—this induction is the first condition of a system of ethics. To act morally, then, is no longer to act according to appearances and the relations of appearances; it is to act in the world of realities and according to the inductive cognition which we have of this world.

This is why we have often said a moral act implies a philosophy, while the construction of a bridge or of a steamboat implies none at all. Without question, whatever hypothesis we make as to the “underlying principle of morality,” practically we shall always be obliged to give it the wider interest in order to reach some conclusion with reference to it; without question, moreover, this wider interest stands in the same relation to the unknown groundwork of morality that, in the word of the Gospel, love to our neighbor seems to stand to the love of God: the only method of determining its contents, the only way of giving it a practical expression. But, again, we need some hypothesis or some more or less conscious philosophical thesis as to the ultimate significance and sense of morality in order to defend morality against egotism. “In science,” as has been objected, “the empirical groundwork of things is confused with the formula; for the physicist heat is the movement itself which permits us to determine its laws.” Yes; because the physicist has need of nothing more than this; but the moralist is bound to determine whether “the wider interest” is a real good instead of merely seeming to be a good; when we are summoned to renounce ourselves, we cannot be satisfied with the merely seeming. We must form for ourselves some idea, some representation of the reality and of the ideal direction which results from the very nature of reality. There is nothing either truly human or individual or social without an ideal which determines it. There is no ideal without a more or less explicit conception of the reality itself, that is, without a conscious or unconscious philosophy, in a scientific or religious form, of which morality is only the translation into sentiments and acts.

III.

Does it follow from the foregoing definitions and distinctions that science will have the moral hegemony of humanity? Purely objective science, no; science at once objective and subjective, with philosophy as its indispensable crown, yes. But when we affirm that philosophy and science must have the moral and intellectual hegemony in future societies, we do not mean by that to deny the influence which must also belong to sentiment, especially to the religious sentiment. In the first place, great philosophical and scientific ideas are accompanied by æsthetical and moral sentiments which give them their practical worth. Then, again, practice is not merely the application of a theory; it is still more a complex action; it is a new synthesis in view of a new end, in some sort, a new theory; it is obliged indeed to take into account other elements than the merely intellectual. Scientific and philosophical knowledge, remaining, as these always must do limited, there will always exist beyond them a sphere which is open to beliefs which are based on intellectual valuations and on sentiments. Hence what we call moral faith, which is the foundation of all religious faith.

According to Bossuet, "when the reason which forces our assent is in the object itself, this is knowledge; . . . when the reason for believing a proposition is derived from him who proposes it, there results belief or faith." The criterion of all faith, according to this early theory, would be affirmation on the testimony of others. But, even then, faith is only an application of knowledge. The reasons which determine the assent are always objective; the other individuals, their moral and intellectual value, their own relation to the fact which is to be established, their competence, their impartiality, etc., all this is the object of our judgment, whether this be probable or certain, but the object, in fine, of scientific judgment. The "assertions without proofs of the wise and experienced man," says Aristotle, have great value, chiefly in moral questions; but, as has been answered, this is not because these assertions are actually without proof, but because he who affirms them has expe-

rienced them, and has reasons for affirming them. Very different is that faith based on testimony, that purely moral belief which according to the followers of Kant constitutes true faith. Moral faith, they say, brings to the philosopher an increase of assurance, an "increase of knowledge." For example, freedom, from the point of view of pure reason, is at best only possible; but from the point of view of the practical reason, it becomes not merely better known, but certain, and is in this sense an object of faith. Faith, as has been said, affects the moral character of the judgment, it furnishes no new judgment.* But faith, even in this form, is, as we think, always an application of knowledge, and is valid only in proportion as it includes cognizing elements. An increase of assurance can come only from an increase of reason, and so of knowledge. That I may have the assurance of freedom from a practical point of view, I must know some moral principle like duty, which makes freedom necessary, and the assurance of freedom will be subordinated to the knowledge of duty as certain and as implying power. I shall not content myself with changing the modality of the judgment; I shall pronounce new judgments. The value of my belief will be in direct proportion to the value of my knowledge. So far as its validity is concerned, faith then is a sort of confused knowledge, merely probable, or assurance limited at certain points. So far as all else is concerned, faith is a sentiment, a passion, a habit. We believe, indeed, not solely with our intellect, but with our sentiments and our innate or acquired impulses. It is incontrovertible that our sentiments and our impulses, the result as they are of a social *action* prolonged through centuries, contain a hereditary store of truth, though a truth mingled with much error. If it were necessary that each individual should with his hypercritical reason doubt everything, and, like a Descartes in miniature, refuse to remember that men had ever existed before him, we should be in great danger of having something very different from what Descartes was. It is then most important that we should take into account the social

* M. Darlu, *Revue Philosophique*, October, 1892.

heritage in those questions which concern others and ourselves. In this sense, it will often be much better for him who does not pretend to be a philosophical innovator or creator to follow the dictates of his heart, not to break too suddenly with the "wisdom of nations." The philosopher himself, who has learned from Socrates and Kant how circumscribed our knowledge is, will hesitate to elevate his personal opinion above the universal conditions of the society in which he lives. In this sense, faith is most legitimate; but nevertheless this legitimacy is still founded on reason: assurance of a sum of truth inherent in the moral and social discipline, assurance of individual fallibility, assurance of the impotence of abstract reasoning when exercised on problems that are too complex, etc. Moral belief remains here, nevertheless, the *rationabile obsequium*.

In questions, even, which do not concern morality, we cannot always analyze all; a man of business who launches himself into an enterprise, acts according to a belief, that is to say, according to a probability which carries with it some risks. He sees reasons for and reasons against; it seems to him that the "*fors* carry it," perhaps because his desire is on this side; and he ventures. But is the conclusion from such reasoning against science? If we could only have a veritable science in all practical affairs, we should all act scientifically. Because we lack this, we all act just as intelligently as we can, and there, where intelligence becomes silent, we follow our instinctive sentiments which are intelligence stored up by life; among these instinctive sentiments, it is always surer and more rational to give the preference to the altruistic, which have been formed by the experience of the ages themselves, and which represent the action upon us of entire society. A "good sentiment" is collective reason, instead of being reason in detail; but it is none the less reasonable for never having been reasoned out. Can you explain to a child all the reasons of what you enjoin upon him? When this is possible, you ought to do it; but is this always possible, his mental status considered? When you have him learn Latin towards the age of nine or ten, can you make him understand all the good

he will derive from classic studies? Does he possess the elements necessary for the solution of the problem? Likewise, these grown children whom we call the people, can they begin in the morning by doubting everything in order to act for the rest of the day in the full glare of the goddess Reason? We must shed abroad as much light as possible, but what if we cannot make it penetrate there where that other form of light, heat, exists? Will you extinguish the fireside because this warms the whole body but does not especially dazzle the eyes? Belief is also very often an æsthetic sentiment, with its own peculiar evidence which it is impossible to explain in detail. Can you prove *more geometrico* that the Venus of Milo is beautiful? Suppose a negro should prefer a Hot-tentot Venus, by what train of reasoning will you be able to convince him? Correctness of taste, trustworthiness of judgment in things of art go as little by systematic reasoning as does the marksman who strikes the target.

It was in this sense that Pascal could correctly say, "The heart has reasons which the reason knows not of." But whose heart? The heart of the savage cannibal? The heart of the civilized man? The heart of the Mussulman? or that of the Christian? All depends on the degree of intelligence in this heart, either in the reflective condition or in the condition of heritage received by tradition and education. The pretended conflict between intelligence and the heart is in reality the conflict of one form of intelligence with another, of the reflective with the spontaneous. By itself and in itself, the word heart has no meaning: sentiment without intelligence has no definite contents. Only blind corporal appetite, like that of hunger and thirst, can dispense with intelligence and with much more! The true reasons of the heart can, therefore, become intelligible to the reason itself, doubtless not to the mere abstract reason, but to the reason which takes into account all the real data of a problem, that is to say, the data of all the reasons. Because we cannot always enumerate, one by one, these complex and profound reasons which present themselves so tumultuously to the inner glance, and are none the less reasonable for that, must we con-

clude that we act blindly? He, who embraces a totality at a single glance and acts accordingly, is not for that reason blind.

Reason, in fine, can exist under a synthetic and an analytic form. The latter gives account to itself of itself. There are, unfortunately, problems in the moral and social order so complex that our analysis, can never be exhaustive. In this case, we are constrained to trust to a synthetic view. If we had to analyze everything to the bottom before acting, we should never act at all. The reason *demi-science* is often more dangerous than ignorance, is because it is an unconscious and half-way analysis, which nevertheless thinks that it is complete and assumes to rule our action. Such a science may be compared with a merchant who should forget half the columns in his bill and act accordingly. He could not fail to be speedily ruined. Nevertheless, *demi-science*, with all its disadvantages, is a necessary moment, a stadium in evolution. The misfortune is that our human science is always *demi-science*; and hence, the very legitimate *rôle* of sentiment and of belief. But never should belief revolt against science and put itself in opposition to it. Science remains, as we have seen, a true social possession; it is a domain the limits of which are unquestionably uncertain, but the interior of which is none the less uncontested and incontestable. In ethics, there is always to be found a part which is truly scientific, that part which relates to the essential conditions of human development, and especially of social development. The domain of sentiment, on the contrary, remains the most indefinite. Where is the seat of the authority here? and where the certitude? Science, it is objected, "concerns itself only with the past," and has only a feeble, practical influence; to belief belongs the future. Those, who make this objection, forget that the peculiar province of science is exactly this, to forecast and to realize the future. Its two methods, induction and deduction, with the verification which completes them and the hypothesis which precedes them, enable science to forestall the future and to direct it in the line of our desire. Static science, which seems to be only of the past, represents all

that is stable for to-morrow and εἰς αἰεί; dynamic science, truly opens up the future and follows change itself, but by means of law.

It is a human duty *par excellence* to seek for the greatest possible amount of certitude. But there is no other true certitude than intellectual certitude. Undoubtedly we must love truth in order to seek for it: if Pythagoras had not loved geometrical truth, he would never have discovered his theorem nor immolated his hecatomb; but the preliminary condition of intellectual exercise is not this exercise itself. So long as Pythagoras confined himself to loving, he discovered nothing. Love and good-will can supplement in a practical way the imperfection of knowledge, but they do not render certain what is uncertain except by an illusion which cannot be erected into a rule, either of moral or of intellectual conduct. The first rule is sincerity towards yourself and others. That faith is "efficacious" is incontestable, but its efficaciousness does not constitute its truthfulness. We can move mountains in the name of an error as well as in the name of truth.

The Mohammedans have gained battles in the name of false beliefs. We often have personal or national prejudices which we erect into universal and permanent needs of the human conscience, without remembering how often the "exigencies of the conscience" have varied with the ages. We cannot make these prejudices a criterion of the value of theories; besides, it is not belief alone which engenders action; it is action also, the fact accomplished and often accomplished, which engenders belief. Belief, far from having the right to always judge the act, is often itself only the product of the act, of ancestral routine. How, then, may we accord the hegemony to belief, since it may be just as truly the product of a secular error as the principle of a truth which dominates practical life? "Mind," said Comte, "ought to be the minister of the heart, never its slave." Hence the condemnation of all dogmatic and authoritative faith. Freedom ought to remain the essence of belief even when this, under the name of religion, becomes collective and social.

According to Auguste Comte, religions become less and

less concrete, and go on becoming more and more abstract, until, like metaphysics, they end in complete negation. But we must distinguish here between the imaginative elements and the philosophical and moral elements in religions. The fact is incontestable that religions progressively lay aside their mythology and become more and more spiritual. But it has been rightly observed that the fetichism of savages, in spite of its apparent luxuriousness of folly, is, in reality, very poor and very monotonous from the point of view of the imagination and of æsthetics. Nothing is so much like the fetichism of the Papuans as the fetichism of the Bushmen, or that of any other inferior tribe. But religions have a metaphysical, moral, and social significance which, far from decreasing with time, becomes, on the contrary, the richer for this. It has been rightly observed how much more complex than the Hebraic idea of Jehovah or the Hindu idea of Brahma, is the Christian idea of the God-man, who lives in us and for us, and in whom we live in our turn. We can say, therefore, that religions themselves continue to become more universal and, at the same time, more individual; they follow the simultaneous law of integration and specification. Then, too, if the tendency of mythology is to disappear, the immediate result of this will not be a tendency on the part of religion to disappear, nor is it proved that the religious sentiment lost in complexity, in depth, in universality, when from fetichism it became pagan, and from pagan Christian.

Meanwhile, there is in this problem great cause of embarrassment. We may indeed ask ourselves whether religion, in so far as it is distinct from metaphysics and from ethics, is not composed of precisely this mythical and imaginative element, of the anthropomorphic representation of the deity, and of miracles united to mysteries. In this case it is certain that religions assume in our time more and more of a philosophical aspect as they lay aside their mythic element. In this respect, we must admit that Protestantism is incontestably nearer to pure philosophy than is Catholicism. Comte would have the right, then, from this point of view, to maintain that religion, in so far as it is only mythology and human representation,

tends to become absorbed in metaphysics and ethics; these being conceived, it is true, under the form of social and collective, and not merely individual, beliefs. Will philosophy and religion take then, as Comte believes, the scientific, positive form? Here, again, all will depend upon our definition of science. If you conceive of science as objective, after the fashion of mathematics and physics, it is impossible to hope for such an objectizing of that which concerns, on one side, the thinking or willing subject and, on the other, the final unity of the subject and of the object in a relation which is truly universal. Philosophy even has not the same point of view as pure science. Much less, still, can religion become objective science if we understand by religion a belief, a sentiment both collective and personal, a union of minds and of wills towards a supreme end. Religion is a philosophy of sentiment and of imagination which is chiefly social, although it addresses itself to the individual; it is a poetry of consciousness seeking after the loftiest universal ideal. Here, again, the point of view has no longer the objective and exterior character of those verities which Comte calls positive. Thus, Comte himself makes an appeal in the religious order to the subjective method, but one incompletely understood and too utilitarian.

We certainly cannot demand of philosophy what these positive religions pretend to give,—positive knowledge as to the mysteries of existence. But in these religions themselves, we see the empire of dogma ever decreasing. Protestantism allows freedom of investigation, and freedom of investigation extended to all, is philosophy itself. Philosophy is not an immutable dogma; it is a progressive movement. Progress is not in philosophy a sign of inferiority, but of superiority. There are Indian tribes who believe that the soul of one who sleeps, is really on a journey, and that he must not be awakened before his soul comes back, at the risk of cutting short his existence. In the same way, we must not awaken the people too suddenly out of their mythological dream: we must give their reason time to return.* Philosophy like science ought none the less to accomplish its work, to be

* See Guyan, "Irréligion de l'avenir."

solicitous of nothing save the truth, to cherish no feeling of hostility towards positive religions, and at the same time make no hypocritical compromises.

It is the consciousness of the unity between our true self and the law of the universe which constitutes religion, philosophically interpreted. To admit, in other words, that the true consciousness of self is reached only through the moral consciousness, and this through the social consciousness, and this through the law of the universe, is to admit the very principle of all true religion, under whatever form one may represent to himself this moral unity of the world. He is moral who says: Do the good, let come what may. He is religious who says: The good will arrive soon or late to all; and morality, far from being an illusion, is the true revelation of the universe. But this idea of a supreme synthesis between the natural and the moral is at bottom thoroughly philosophical, and it pertains to philosophy to justify it. Instead of drawing sceptical or mystical conclusions from this present debate as to the value of science, as is now done in France and England, we should rather form a superior conception of science and its *rôle*. We have been, and that for a long time, one of those who rebel against the conception of science as purely representative; a conception which is intimately bound up with that of a purely reflective intelligence exercised on objects independent of itself. He who maintains that the idea is a force, ought to maintain likewise that science also is a force, that is to say, an action and a production, not merely a reflection of objects.

One of the errors of science and of philosophy in the intellectualist form which they have taken in our epoch, has been precisely this, to overlook the fact that philosophy and science are not solely speculations, but also actions and productions.* They are so not merely by their possible consequences or by the exterior end which they have in view, but indeed in themselves and by themselves, in their own essence and in their formation.

* See "Evolutionnisme des Idées-forces."

Science, indeed, discovers new solutions only by asking new questions, and it is here we must declare: Every question, well asked, is half answered. Moreover, a question asked of nature is always an idea of mind, a directing idea, an idea-force. The question is worth as much as the idea, and the reply as the question.

When Plato sought for universal forms in things, when Aristotle sought there the individual act, and its final cause, when the middle age attempted to find there the quiddity, the substance-form,—the directing ideas led to very different questions from the one which distinctively modern science asks: how? according to what law? After all, then, philosophical ideas govern science. In other words, it is the subjective development of the human intelligence and the self-consciousness which it attains which permit it to propound, an objective world of new questions and to reply, knowledge of the world being inseparable from self-consciousness. We have here a double development, the two elements of which are in partnership. We must know ourselves better and better in order to interrogate nature; we must know nature better and better in order to interrogate ourselves. Philosophy and science, without ever being confounded with one another, are always united: the progress of one is the progress of the other. The world becomes what it is to our cognizance only by the development of our own consciousness: we can find in it nothing which we are not prepared to ask it by virtue of our own internal development. And not only is the power itself of interrogating nature characteristic of thought; but yet more, after having taken the initiative in the question, it ought very often to take that of the reply, under the form of hypothesis at first, then that of verification, then under that of application. We have repeated many times, while giving it a broader sense, the saying of Aristotle: "To know is to act." Bacon has declared in vain that we must passively obey nature in order to command her. Even in physics, we must reconstruct by the instrumentality of our thought an ideal nature, and act on this in order to determine later whether real nature co-operates with our action and we

with that of nature. The conception necessarily precedes the experimentation, and what we call truth is the result of co-operation, an efficacious collaboration, not a passive registering of mere inert impressions. Psychology is far less passive than physics. It also is a production of facts, an experimentation which combines and calls forth phenomena. We act always in psychic facts. It is through ourselves, at least in part, that they exist: in observing them, we modify them, often even evoking them. But some one will ask: How shall we apprehend, then, an independent reality? We answer, that we do not create psychic facts; and that if our effort to know them by reflexion modifies and changes them, this is by virtue of regular laws, by virtue of a determination which can become the object of consciousness. Besides, in psychic facts there is the sensitive element which is passive, and which is introduced into us from without, an object of possible study. The relations of our sensations, of our pleasures, of our pains, all this is also an object of possible study. It is doubtless not an isolated subjective phenomenon which we are examining, as none such exists without an objective element. But it is legitimate and possible to study interior facts, not as the reflex of exterior objects, but only in so far as these are the expression of the profounder subjective phenomenon which underlies them. If we are unable to make of this inner subjective phenomenon an object of discursive science, and even if we are obliged to consider it as an ultimate datum, it is still true that we can draw ever nearer to this remote subjectivity and organize interior facts in their relation to it, and not in their relation to the outer world. Thus is a psychology possible; not a psychology that is separated from all physiology, but a psychology, whatever special name we may give to it, which is a knowledge of ourselves such as we become, such as we make ourselves under the action from without and the reaction from within. For a still stronger reason, the active character of intelligence is still more manifest in general philosophy where absolute verification becomes impossible. When science has discovered law and order in nature, it has not yet acquired its highest value nor its greatest interest. Science, to reach

this, must appear in essential relation with intelligence even and with will. The part of universal philosophy is to re-establish this relation which has been neglected or despised by positivism. Philosophy alone is the study of the reality itself both as fact and consciousness. The contemplative consciousness? or the active? Not the former, for by the very fact that it contemplates and reflects, it changes and abstracts; but in the second, in which we are the whole of ourselves, in which, along with the sentiment and the action of practical life, we obtain the most intense sentiment of reality. This reality, moreover, is not immobile and as if crystallized in the past; it is in the process of becoming and determines the future. It embraces then as one moment the *done* and the *to-be done*, the realized and the more or less conscious ideal which realizes it.

The reaction against science will not have been in vain. It will have served to prepare a *philosophy of action* in which the thought is no longer merely a reflection and a copy of the model subjectively presented, but a creation of new effects in harmony with those already existing. We believe, then, that if we attribute a "force" to the "idea," we can conciliate all that is exact in the intellectual theory of truth which makes a "harmony" of the two, and in the volition theory which makes an "action" or an "active belief" of them; truth is the simultaneous and individual harmony of actions and of ideas, the determinism of which is the manifestation, the will not being any more unintelligent than the intelligence is inactive. We conclude, therefore, that the true hegemony belongs to the intelligent volition of universal ends, a volition which exists as obscure consciousness in religion, but reaches in philosophy and in science the clear consciousness of its goal and of its means.

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